

**COMPUTER AVIONICS MAINTENANCE TRAINER, DEVICE 6F29****TRAINING CATEGORY:**

BASIC SCIENCE (Computer)

**ORIGINATING AGENCY:**

DCNO/AIR

**SECURITY CLASSIFICATION:**

Device 6F29 is unclassified.

**CONTRACT IDENTIFICATION:**Manufactured by NIDA Corporation, 300 E.  
John Road Blvd., Melbourne, FL 32904 under  
NAVTRASYSCEN Contract No. N61339-86-C-0107.**LOCAL STOCK NUMBER:**

6910-LL-C00-6816

**TRAINING CATEGORY:**

Basic Microprocessor Maintenance  
Training System

**ORIGINATING AGENCY:**

NIDA CORPORATION

**SECURITY CLASSIFICATION OF DEVICE:**

Device 6F29 is unclassified.

**PURPOSE OF DEVICE:**

To provide indepth hands on training in the maintenance and repair of Microprocessors and Microcomputers.

**INTENDED USE:**

In Basic Electricity and Electronics Schools and various Electronics Oriented "A" Schools for classroom training of enlisted electronics maintenance personnel.

**FUNCTIONAL DESCRIPTION:**

The Device 6F29 Microcomputer System is comprised of a workstation with a microcomputer trainer of the following configuration:

1. PROCESSOR - 8 bit CPU (8080A), Clock (8224), System Controller (8228), Bus Drivers (81LS95).
2. MEMORY - 2 KBytes of RAM, up to 8 KBytes of EPROM, Chip Select, 64 KByte Dynamic RAM with 4 KByte Bootstrap EPROM and a dual 5-1/4" double sided - double density floppy disk.
3. SUPPORT - I/O Controller (8279A), Timer/Counter (8253), Display Driver (4555B), Interrupt Controller (8259A), Single Machine Cycle Stepping Circuitry and bus display illumination circuitry.

4. DISPLAYS - 13" CRT, 8 character interactive display, address and data bus discrete and hexadecimal displays and control lines discrete display.

5. INPUTS - 27 key keypad, keyboard with 62 ASCII controlled characters, A/D voltage control.

6. OUTPUTS - 3 channel RS232C, panel meter for D/A outputs, and an 80 column printer.

7. FAULT INSERTION - 240 address, data and control line faults keypad inserted and cleared.

8. LOGIC PROBE - LED high, low, and pulse indicators with logic family selection and pulse storage.

The 6F29 stresses the system hardware providing practical, hands-on training of technicians whose ultimate responsibility will be maintenance and repair of microcomputers and microprocessor base systems.

The Microcomputer System is hardware oriented but also has full software capabilities of commonly available microcomputer trainers. The software training is as basic as diagnostics or as complex as full programmability which permits training of higher level technicians.

The 6F29 is a generic microcomputer trainer in a modular mechanical configuration. Major microcomputer building blocks are contained on separate printed circuit (PC) assemblies. The modular configuration provides subassembly or card-swapping level of troubleshooting, and troubleshooting to the faulty component within a faulty subassembly.

As the electronics technology changes new microcomputer assemblies are developed and offered, providing the instructor the ability to quickly and inexpensively update the program of instruction in order to keep pace with the electronics microcomputer industry. In cases where schools can identify a specific need, experiments demonstrating unique microcomputer circuits can be developed.

**OPTIONS (NOT SUPPLIED)**

16 bit processor, CPU register display, signature analyzer, 8 channel oscilloscope display, tape storage, design kits and logic analyzer.

**AVAILABLE COURSES:**

Microcomputer Hardware, Microcomputer Software, Microcomputer Systems and Microcomputer Troubleshooting.

**PHYSICAL INFORMATION:**

Dimensions: 60" (152.4cm) W,  
30" (76.2cm) D, 47" (119.4cm) H.

Weight: 200 lbs., 91 Kg

Trainer Case: Painted aluminum.  
Workstation: Painted steel with wood grained laminated work surface.

**EQUIPMENT REQUIRED (NOT SUPPLIED):**

Dual Trace Oscilloscope  
Multimeter

**POWER REQUIREMENTS:**

115 Vac (3A max) 50/60 Hz switch controlled with pilot light & primary fuse protection.

**PUBLICATIONS FURNISHED:**

Instruction Manual for operation of the Microcomputer Training System Device 6F29.

**PERSONNEL:**

Instructor: Qualified to teach micro-computer principles and repair.  
Operator: Student (Trainee)  
Trainees: Up to two per device.

Maintenance: As required.

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